

### REMARKS

Applicant appreciates the Examiner's attention to the above referenced application. Claims 1-5, 12-16, 23-25, and 31-33 were rejected. Claims 6-11, 17-22, and 26-30 were withdrawn. Claims 1, 5, 12, 16 and 23 are amended. Claims 31-33 are cancelled. Claims 1-5, 12-16, and 23-25 currently remain.

The Examiner's attention is drawn to the restriction requirement previously communicated to the Applicant. The restriction requirement was clearly wrong and should be rescinded for the following reasons.

Figure 1 discloses at a high level the processing taking place in embodiments of the present invention. In particular, at block 110, during the recording phase, display data of the application program and user activity are analyzed by the cognitive control framework system to generate an execution scenario. This step is recited as the second element of claim 1 ("analyzing the captured user input data and displayed images to generate an execution scenario during the recording phase"). Figure 2 discloses the *same* processing at a lower, more detailed level. That is, analyzing the captured input data and displayed images is further described in detail at page 8, lines 14-21 of the Specification, which corresponds to blocks 200, 202, and 204 of Figure 2. These blocks form the basis of dependent claim 6, which further limits independent claim 1. That is, the step of analyzing the captured input data and displayed images (block 110 of Figure 1) is recited as comprising detecting contours of objects shown in a displayed image, detecting an object of activity from among the objects, and detecting additional objects located adjacent to the object of activity (blocks 200, 202, and 204 of Figure 2). Thus, dependent claim 6 further limits independent claim 1.

Similarly, claims 7-11 recite further limitations of the fourth element of claim 1 ("performing image analysis on images..."). Details of performing image analysis on playback display data and record display data (from the recording phase) during playback processing (see block 116 of Figure 1) are shown on page 9, lines 1-29 of the Specification, and shown in Figure 2 as blocks 206, 208, 210, 212, and 214. Thus, dependent claims 7-11 further limit independent claim 1.

There is only one patentably distinct invention disclosed in the present Specification. It is described at a high level in Figure 1, and at a lower, more detailed level in Figure 2. There are

no separate genus and species herein. The Examiner has misunderstood the present invention. Accordingly, the restriction requirement should be withdrawn and claims 7-11, 17-22, and 26-30 should be reinstated in this application.

### **35 USC 101**

Claims 1-5 are rejected under 35 USC 101 as not falling within one of the four statutory categories of invention.

Claim 1 has been amended to more particularly recite the present invention by clearly reciting that the claimed method is tied to a particular apparatus and transforms underlying subject matter to a different state or thing. More specifically, the method is performed by a computer system, the application program is executed by the processor of the computer system, the GUI is displayed on a display coupled to a computer system, and the images displayed by the GUI on the display are captured (e.g., by screen shots) and copied into files in a memory on the computer system. The user input data (such as physical keyboard character inputs and mouse movements and mouse button selections made by a human using the computer system) are captured. Both the captured user input data and the captured GUI displayed images are then analyzed by the computing system to generate the execution scenario script. The execution scenario script is a particular article that is transformed by embodiments of the present invention. Detailed image analysis operations are performed on the captured display images from the recording and playback phases of operation. The results of this image analysis are used to automatically control execution of the application program by the computer system. The execution scenario script comprises a script of commands/actions that is generated by embodiments of the present invention and subsequently transformed. The result of this processing is that automated testing of new application programs having GUIs may be performed on a computer system in such a manner that is OS-independent, API-independent, flexible, efficient, and extensible.

Recent patentable subject matter interim guidelines have been introduced. According to these guidelines, analysis of patentable subject matter should be focused on whether an abstract idea is being claimed, and further that the machine-or-transformation test is not the sole test to be used in determining patentable subject matter. As one skilled in the art can readily see,

embodiments of the present invention are focused on analyzing images displayed on a computer display in order to generate execution scenario test scripts to control subsequent operation of a computer system. The specific process for accomplishing this is not an abstract idea, such as a mathematical algorithm or a business method. Embodiments of the present invention are tied to the inner workings of a particular computer system, the images that are displayed on the computer display, and controlling the operation of the particular computer system. The computer system is integrally involved in the performance of the claimed method.

Further, the claimed method results in the transformation of a particular article, that is, the execution scenario script. The execution scenario script is generated and stored in a computer readable storage medium such as a hard disk drive, solid state drive, or random access memory (RAM) for future use in the efficient testing the GUIs of new application programs. This particular transformation occurs because the execution scenario script is generated where it did not exist before, and repeated execution of the claimed method may update and refine the script. As such, a particular article is being transformed. In addition, the nature of the article being transformed is computer memory, not an abstract idea such as a contractual obligation or a mental judgment.

Additionally, the claimed method does not relate to a law of nature or an abstract idea; it does not involve a general concept. The claimed method would not preempt anything in other fields. It is not so abstract and sweeping as to cover both known and unknown uses of the concept. It does not apply insignificant post-solution activity or include a field of use limitation. It does not involve physical phenomena. It fits none of the recognized exceptions to patentable subject matter. Embodiments of the present invention are specific processes for generating GUI test scripts for use in testing new GUIs of new application programs, and controlling those application program's execution in a specific way while running on a specific computer system. Therefore, claim 1 as currently presented is statutory and this rejection must be withdrawn.

If the Examiner does not accept the above argument concerning statutory subject matter, the Applicant is hard pressed to understand how *any* computer-implemented invention could possibly be patentable subject matter under the Examiner's rationale. Under the Examiner's rationale, tens of thousands of existing patents granted by the USPTO for computer-implemented inventions are invalid. That cannot be the intended result of the US Supreme Court and the

USPTO's interim guidelines. It is strongly contended that the Examiner's current interpretation is not consistent with the holding of *Bilski v. Kappos* and the USPTO's interim guidelines, and that the section 101 rejection be withdrawn.

Claims 12-16 are rejected under 35 USC 101 as being directed to non-statutory subject matter.

Claim 12 has been amended to recite a "computer readable medium." Thus, claim 12 as currently presented is statutory and this rejection must be withdrawn. Claims 13-16 depend from allowable claim 12.

### **35 USC 112**

Claims 31-33 are rejected under 35 USC 112, second paragraph as failing to comply with the written description requirement.

Claims 31-33 are cancelled. Therefore, the rejection is moot and must be withdrawn.

### **35 USC 102(a)**

Claims 1-4, 12-15, and 23-25 are rejected under 35 USC 102(a) as being anticipated by Redstone Software, Inc. ("Software Automation & Testing"), hereinafter Redstone.

Independent claims 1, 12, and 23 have been amended to more particularly recite embodiments of the present invention. The limitation "checking recorded time conditions in the execution scenario to handle variations in playback speed" has been added. This feature in embodiments of the present invention is described in the Specification at page 5, line 27 to page 7, line 2. See also, Figure 1, block 118. Redstone does not disclose or suggest that the time conditions recorded into the execution scenario during the recording phase are checked during the playback phase to handle possible variations in playback speed of the application program. Hence, independent claims 1, 12, and 23, and all claims dependent therefrom, are allowable as currently presented.

Regarding claims 2, 3, 4, and 12-15, and 23-25, these claims all depend from allowable independent claims 1, 12, and 23, respectively.

**35 USC 103(a)**

Claims 5, 16 and 31-32 are rejected under 35 USC 103(a) as being unpatentable over Redstone.

Claims 5 and 16 depend from allowable independent claims 1 and 12. Therefore, they are also allowable. Claims 31-32 have been cancelled.

**CONCLUSION**

Applicant respectfully requests reconsideration in view of the remarks and amendments set forth above. If the Examiner has any questions, the Examiner is encouraged to contact the undersigned at (480) 715-3681. Please charge any shortage of fees in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-0221 and please credit any excess fees to such account.

Respectfully submitted,

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Dated: 8/20/10 \_\_\_\_\_

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